

ne-nun

RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: 10/767,561

Source: IFwo

Date Processed by STIC: 8/31/04

ENTERED



IFWO

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/767,561

DATE: 03/07/2005

TIME: 15:24:12

Input Set : N:\Crf4\Reffold\10_folder\J767561.raw

Output Set: N:\CRF4\03072005\J767561.raw

SEQUENCE LISTING

1 (1) GENERAL INFORMATION:

2 (i) APPLICANT: Freeman, Gordon J.
3 Nadler, Lee M.

4 Gray, Gary S.

5 (ii) TITLE OF INVENTION: TUMOR CELLS MODIFIED TO EXPRESS B7-2 AND B7-3
6 WITH INCREASED IMMUNOGENICITY AND USES THEREFOR

7 (iii) NUMBER OF SEQUENCES: 8

8 (iv) CORRESPONDENCE ADDRESS:

9 (A) ADDRESSEE: LAHIVE & COCKFIELD
10 (B) STREET: 60 State Street, Suite 510
11 (C) CITY: Boston
12 (D) STATE: Massachusetts
13 (E) COUNTRY: USA
14 (F) ZIP: 02109

15 (v) COMPUTER READABLE FORM:

16 (A) MEDIUM TYPE: Floppy disk
17 (B) COMPUTER: IBM PC compatible
18 (C) OPERATING SYSTEM: PC-DOS/MS-DOS
19 (D) SOFTWARE: PatentIn Release #1.0, Version #1.25

20 (vi) CURRENT APPLICATION DATA:

C--> 21 (A) APPLICATION NUMBER: US/10/767,561
C--> 22 (B) FILING DATE: 28-Jan-2004
23 (C) CLASSIFICATION:

24 (vii) PRIOR APPLICATION DATA:

W--> 25 (A) APPLICATION NUMBER: US/09/206,132
26 (B) FILING DATE: 07-DEC-1998

W--> 27 (A) APPLICATION NUMBER: 08/456,104

28 (B) FILING DATE:

W--> 29 (A) APPLICATION NUMBER: 08/101,624

30 (B) FILING DATE: 26-JUL-1993

W--> 31 (A) APPLICATION NUMBER: 08/109,393

32 (B) FILING DATE: 19-AUG-1993

33 (viii) ATTORNEY/AGENT INFORMATION:

34 (A) NAME: Mandragouras, Amy E.
35 (B) REGISTRATION NUMBER: 36,207
36 (C) REFERENCE/DOCKET NUMBER: RPI-008

37 (ix) TELECOMMUNICATION INFORMATION:

38 (A) TELEPHONE: (617) 227-7400
39 (B) TELEFAX: (617) 227-5941

40 (2) INFORMATION FOR SEQ ID NO: 1:

41 (i) SEQUENCE CHARACTERISTICS:
42 (A) LENGTH: 1120 base pairs

RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/767,561

DATE: 03/07/2005
TIME: 15:24:12

Input Set : N:\Crf4\Refhold\10_folder\J767561.raw
Output Set: N:\CRF4\03072005\J767561.raw

43 (B) TYPE: nucleic acid
44 (C) STRANDEDNESS: single
45 (D) TOPOLOGY: linear
46 (ii) MOLECULE TYPE: cDNA
47 (ix) FEATURE:
48 (A) NAME/KEY: CDS
49 (B) LOCATION: 107..1093
50 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 1:
51 CACAGGGTGA AAGCTTGCT TCTCTGCTGC TGTAACAGGG ACTAGCACAG ACACACGGAT 60
52 GAGTGGGGTC ATTTCCAGAT ATTAGGTAC AGCAGAAGCA GCCAAA ATG GAT CCC 115
53 Met Asp Pro
54 1
55 CAG TGC ACT ATG GGA CTG AGT AAC ATT CTC TTT GTG ATG GCC TTC CTG 163
56 Gln Cys Thr Met Gly Leu Ser Asn Ile Leu Phe Val Met Ala Phe Leu
57 5 10 15
58 CTC TCT GGT GCT CCT CTG AAG ATT CAA GCT TAT TTC AAT GAG ACT 211
59 Leu Ser Gly Ala Ala Pro Leu Lys Ile Gln Ala Tyr Phe Asn Glu Thr
60 20 25 30 35
61 GCA GAC CTG CCA TGC CAA TTT GCA AAC TCT CAA AAC CAA AGC CTG AGT 259
62 Ala Asp Leu Pro Cys Gln Phe Ala Asn Ser Gln Asn Gln Ser Leu Ser
63 40 45 50
64 GAG CTA GTA GTA TTT TGG CAG GAC CAG GAA AAC TTG GTT CTG AAT GAG 307
65 Glu Leu Val Val Phe Trp Gln Asp Gln Glu Asn Leu Val Leu Asn Glu
66 55 60 65
67 GTA TAC TTA GGC AAA GAG AAA TTT GAC AGT GTT CAT TCC AAG TAT ATG 355
68 Val Tyr Leu Gly Lys Glu Lys Phe Asp Ser Val His Ser Lys Tyr Met
69 70 75 80
70 GGC CGC ACA AGT TTT GAT TCG GAC AGT TGG ACC CTG AGA CTT CAC AAT 403
71 Gly Arg Thr Ser Phe Asp Ser Asp Ser Trp Thr Leu Arg Leu His Asn
72 85 90 95
73 CTT CAG ATC AAG GAC AAG GGC TTG TAT CAA TGT ATC ATC CAT CAC AAA 451
74 Leu Gln Ile Lys Asp Lys Gly Leu Tyr Gln Cys Ile Ile His His Lys
75 100 105 110 115
76 AAG CCC ACA GGA ATG ATT CGC ATC CAC CAG ATG AAT TCT GAA CTG TCA 499
77 Lys Pro Thr Gly Met Ile Arg Ile His Gln Met Asn Ser Glu Leu Ser
78 120 125 130
79 GTG CTT GCT AAC TTC AGT CAA CCT GAA ATA GTA CCA ATT TCT AAT ATA 547
80 Val Leu Ala Asn Phe Ser Gln Pro Glu Ile Val Pro Ile Ser Asn Ile
81 135 140 145
82 ACA GAA AAT GTG TAC ATA AAT TTG ACC TGC TCA TCT ATA CAC GGT TAC 595
83 Thr Glu Asn Val Tyr Ile Asn Leu Thr Cys Ser Ser Ile His Gly Tyr
84 150 155 160
85 CCA GAA CCT AAG AAG ATG AGT GTT TTG CTA AGA ACC AAG AAT TCA ACT 643
86 Pro Glu Pro Lys Lys Met Ser Val Leu Leu Arg Thr Lys Asn Ser Thr
87 165 170 175
88 ATC GAG TAT GAT GGT ATT ATG CAG AAA TCT CAA GAT AAT GTC ACA GAA 691
89 Ile Glu Tyr Asp Gly Ile Met Gln Lys Ser Gln Asp Asn Val Thr Glu
90 180 185 190 195
91 CTG TAC GAC GTT TCC ATC AGC TTG TCT GTT TCA TTC CCT GAT GTT ACG 739

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/767,561

DATE: 03/07/2005

TIME: 15:24:12

Input Set : N:\Crf4\Refhold\10_folder\J767561.raw
 Output Set: N:\CRF4\03072005\J767561.raw

92	Leu	Tyr	Asp	Val	Ser	Ile	Ser	Leu	Ser	Val	Ser	Phe	Pro	Asp	Val	Thr	
93				200				205							210		
94	AGC	AAT	ATG	ACC	ATC	TTC	TGT	ATT	CTG	GAA	ACT	GAC	AAG	ACG	CGG	CTT	787
95	Ser	Asn	Met	Thr	Ile	Phe	Cys	Ile	Leu	Glu	Thr	Asp	Lys	Thr	Arg	Leu	
96			215					220							225		
97	TTA	TCT	TCA	CCT	TTC	TCT	ATA	GAG	CTT	GAG	GAC	CCT	CAG	CCT	CCC	CCA	835
98	Leu	Ser	Ser	Pro	Phe	Ser	Ile	Glu	Leu	Glu	Asp	Pro	Gln	Pro	Pro	Pro	
99				230				235							240		
100	GAC	CAC	ATT	CCT	TGG	ATT	ACA	GCT	GTA	CTT	CCA	ACA	GTT	ATT	ATA	TGT	883
101	Asp	His	Ile	Pro	Trp	Ile	Thr	Ala	Val	Leu	Pro	Thr	Val	Ile	Ile	Cys	
102			245				250								255		
103	GTG	ATG	GTT	TTC	TGT	CTA	ATT	CTA	TGG	AAA	TGG	AAG	AAG	AAG	AAG	CGG	931
104	Val	Met	Val	Phe	Cys	Leu	Ile	Leu	Trp	Lys	Trp	Lys	Lys	Lys	Arg		
105	260				265				270						275		
106	CCT	CGC	AAC	TCT	TAT	AAA	TGT	GGA	ACC	AAC	ACA	ATG	GAG	AGG	GAA	GAG	979
107	Pro	Arg	Asn	Ser	Tyr	Lys	Cys	Gly	Thr	Asn	Thr	Met	Glu	Arg	Glu	Glu	
108					280				285						290		
109	AGT	GAA	CAG	ACC	AAG	AAA	AGA	GAA	AAA	ATC	CAT	ATA	CCT	GAA	AGA	TCT	1027
110	Ser	Glu	Gln	Thr	Lys	Lys	Arg	Glu	Lys	Ile	His	Ile	Pro	Glu	Arg	Ser	
111					295			300							305		
112	GAT	GAA	GCC	CAG	CGT	GTT	TTT	AAA	AGT	TCG	AAG	ACA	TCT	TCA	TGC	GAC	1075
113	Asp	Glu	Ala	Gln	Arg	Val	Phe	Lys	Ser	Ser	Lys	Thr	Ser	Ser	Cys	Asp	
114			310				315								320		
115	AAA	AGT	GAT	ACA	TGT	TTT	TAATTAAAGA	GTAAAGCCCA	AAAAAAA								1120
116	Lys	Ser	Asp	Thr	Cys	Phe											
117			325														
119	(2)	INFORMATION FOR SEQ ID NO: 2:															
120	(i)	SEQUENCE CHARACTERISTICS:															
121	(A)	LENGTH: 329 amino acids															
122	(B)	TYPE: amino acid															
123	(D)	TOPOLOGY: linear															
124	(ii)	MOLECULE TYPE: protein															
125	(xi)	SEQUENCE DESCRIPTION: SEQ ID NO: 2:															
126	Met	Asp	Pro	Gln	Cys	Thr	Met	Gly	Leu	Ser	Asn	Ile	Leu	Phe	Val	Met	
127	1				5				10						15		
128	Ala	Phe	Leu	Leu	Ser	Gly	Ala	Ala	Pro	Leu	Lys	Ile	Gln	Ala	Tyr	Phe	
129				20				25							30		
130	Asn	Glu	Thr	Ala	Asp	Leu	Pro	Cys	Gln	Phe	Ala	Asn	Ser	Gln	Asn	Gln	
131				35				40							45		
132	Ser	Leu	Ser	Glu	Leu	Val	Val	Phe	Trp	Gln	Asp	Gln	Glu	Asn	Leu	Val	
133				50				55							60		
134	Leu	Asn	Glu	Val	Tyr	Leu	Gly	Lys	Glu	Lys	Phe	Asp	Ser	Val	His	Ser	
135				65			70			75					80		
136	Lys	Tyr	Met	Gly	Arg	Thr	Ser	Phe	Asp	Ser	Asp	Ser	Trp	Thr	Leu	Arg	
137				85				90							95		
138	Leu	His	Asn	Leu	Gln	Ile	Lys	Asp	Lys	Gly	Leu	Tyr	Gln	Cys	Ile	Ile	
139				100			105								110		
140	His	His	Lys	Lys	Pro	Thr	Gly	Met	Ile	Arg	Ile	His	Gln	Met	Asn	Ser	
141				115			120								125		

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/767,561

DATE: 03/07/2005

TIME: 15:24:12

Input Set : N:\Crf4\Reftold\10_folder\J767561.raw
 Output Set: N:\CRF4\03072005\J767561.raw

142 Glu Leu Ser Val Leu Ala Asn Phe Ser Gln Pro Glu Ile Val Pro Ile
 143 130 135 140
 144 Ser Asn Ile Thr Glu Asn Val Tyr Ile Asn Leu Thr Cys Ser Ser Ile
 145 145 150 155 160
 146 His Gly Tyr Pro Glu Pro Lys Lys Met Ser Val Leu Leu Arg Thr Lys
 147 165 170 175
 148 Asn Ser Thr Ile Glu Tyr Asp Gly Ile Met Gln Lys Ser Gln Asp Asn
 149 180 185 190
 150 Val Thr Glu Leu Tyr Asp Val Ser Ile Ser Leu Ser Val Ser Phe Pro
 151 195 200 205
 152 Asp Val Thr Ser Asn Met Thr Ile Phe Cys Ile Leu Glu Thr Asp Lys
 153 210 215 220
 154 Thr Arg Leu Leu Ser Ser Pro Phe Ser Ile Glu Leu Glu Asp Pro Gln
 155 225 230 235 240
 156 Pro Pro Pro Asp His Ile Pro Trp Ile Thr Ala Val Leu Pro Thr Val
 157 245 250 255
 158 Ile Ile Cys Val Met Val Phe Cys Leu Ile Leu Trp Lys Trp Lys Lys
 159 260 265 270
 160 Lys Lys Arg Pro Arg Asn Ser Tyr Lys Cys Gly Thr Asn Thr Met Glu
 161 275 280 285
 162 Arg Glu Glu Ser Glu Gln Thr Lys Lys Arg Glu Lys Ile His Ile Pro
 163 290 295 300
 164 Glu Arg Ser Asp Glu Ala Gln Arg Val Phe Lys Ser Ser Lys Thr Ser
 165 305 310 315 320
 166 Ser Cys Asp Lys Ser Asp Thr Cys Phe
 167 325
 168 (2) INFORMATION FOR SEQ ID NO: 3:
 169 (i) SEQUENCE CHARACTERISTICS:
 170 (A) LENGTH: 1151 base pairs
 171 (B) TYPE: nucleic acid
 172 (C) STRANDEDNESS: double
 173 (D) TOPOLOGY: linear
 174 (ii) MOLECULE TYPE: cDNA
 175 (ix) FEATURE:
 176 (A) NAME/KEY: CDS
 177 (B) LOCATION: 99..1028
 178 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3:
 179 GGAGCAAGCA GACGCGTAAG AGTGGCTCCT GTAGGCAGCA CGGACTTGAA CAACCAGACT
 180 60
 181 CCTGTAGACG TGTTCCAGAA CTTACGGAAG CACCCACG ATG GAC 104
 182 Met Asp
 183 1
 184 CCC AGA TGC ACC ATG GGC TTG GCA ATC CTT ATC TTT GTG ACA GTC TTG 152
 185 Pro Arg Cys Thr Met Gly Leu Ala Ile Leu Ile Phe Val Thr Val Leu
 186 5 10 15
 187 CTG ATC TCA GAT GCT GTT TCC GTG GAG ACG CAA GCT TAT TTC AAT GGG 200
 188 Leu Ile Ser Asp Ala Val Ser Val Glu Thr Gln Ala Tyr Phe Asn Gly
 189 20 25 30
 190 ACT GCA TAT CTG CCG TGC CCA TTT ACA AAG GCT CAA AAC ATA AGC CTG
 191 Thr Ala Tyr Leu Pro Cys Pro Phe Thr Lys Ala Gln Asn Ile Ser Leu 248

RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/767,561

DATE: 03/07/2005
TIME: 15:24:12

Input Set : N:\Crf4\Refhold\10_folder\J767561.raw
Output Set: N:\CRF4\03072005\J767561.raw

192	35	40	45	50	
193	AGT GAG CTG GTA GTA TTT TGG CAG GAC CAG CAA AAG TTG GTT CTG TAC				296
194	Ser Glu Leu Val Val Phe Trp Gln Asp Gln Gln Lys Leu Val Leu Tyr				
195	55	60	65		
196	GAG CAC TAT TTG GGC ACA GAG AAA CTT GAT AGT GTG AAT GCC AAG TAC				344
197	Glu His Tyr Leu Gly Thr Glu Lys Leu Asp Ser Val Asn Ala Lys Tyr				
198	70	75	80		
199	CTG GGC CGC ACG AGC TTT GAC AGG AAC AAC TGG ACT CTA CGA CTT CAC				392
200	Leu Gly Arg Thr Ser Phe Asp Arg Asn Asn Trp Thr Leu Arg Leu His				
201	85	90	95		
202	AAT GTT CAG ATC AAG GAC ATG GGC TCG TAT GAT TGT TTT ATA CAA AAA				440
203	Asn Val Gln Ile Lys Asp Met Gly Ser Tyr Asp Cys Phe Ile Gln Lys				
204	100	105	110		
205	AAG CCA CCC ACA GGA TCA ATT ATC CTC CAA CAG ACA TTA ACA GAA CTG				488
206	Lys Pro Pro Thr Gly Ser Ile Ile Leu Gln Gln Thr Leu Thr Glu Leu				
207	115	120	125	130	
208	TCA GTG ATC GCC AAC TTC AGT GAA CCT GAA ATA AAA CTG GCT CAG AAT				536
209	Ser Val Ile Ala Asn Phe Ser Glu Pro Glu Ile Lys Leu Ala Gln Asn				
210	135	140	145		
211	GTA ACA GGA AAT TCT GGC ATA AAT TTG ACC TGC ACG TCT AAG CAA GGT				584
212	Val Thr Gly Asn Ser Gly Ile Asn Leu Thr Cys Thr Ser Lys Gln Gly				
213	150	155	160		
214	CAC CCG AAA CCT AAG AAG ATG TAT TTT CTG ATA ACT AAT TCA ACT AAT				632
215	His Pro Lys Pro Lys Lys Met Tyr Phe Leu Ile Thr Asn Ser Thr Asn				
216	165	170	175		
217	GAG TAT GGT GAT AAC ATG CAG ATA TCA CAA GAT AAT GTC ACA GAA CTG				680
218	Glu Tyr Gly Asp Asn Met Gln Ile Ser Gln Asp Asn Val Thr Glu Leu				
219	180	185	190		
220	TTC AGT ATC TCC AAC AGC CTC TCT TCA TTC CCG GAT GGT GTG TGG				728
221	Phe Ser Ile Ser Asn Ser Leu Ser Leu Ser Phe Pro Asp Gly Val Trp				
222	195	200	205	210	
223	CAT ATG ACC GTT GTG TGT GTT CTG GAA ACG GAG TCA ATG AAG ATT TCC				776
224	His Met Thr Val Val Cys Val Leu Glu Thr Glu Ser Met Lys Ile Ser				
225	215	220	225		
226	TCC AAA CCT CTC AAT TTC ACT CAA GAG TTT CCA TCT CCT CAA ACG TAT				824
227	Ser Lys Pro Leu Asn Phe Thr Gln Glu Phe Pro Ser Pro Gln Thr Tyr				
228	230	235	240		
229	TGG AAG GAG ATT ACA GCT TCA GTT ACT GTG GCC CTC CTC CTT GTG ATG				872
230	Trp Lys Glu Ile Thr Ala Ser Val Thr Val Ala Leu Leu Val Met				
231	245	250	255		
232	CTG CTC ATC ATT GTA TGT CAC AAG AAG CCG AAT CAG CCT AGC AGG CCC				920
233	Leu Leu Ile Ile Val Cys His Lys Lys Pro Asn Gln Pro Ser Arg Pro				
234	260	265	270		
235	AGC AAC ACA GCC TCT AAG TTA GAG CGG GAT AGT AAC GCT GAC AGA GAG				968
236	Ser Asn Thr Ala Ser Lys Leu Glu Arg Asp Ser Asn Ala Asp Arg Glu				
237	275	280	285	290	
238	ACT ATC AAC CTG AAG GAA CTT GAA CCC CAA ATT GCT TCA GCA AAA CCA				1016
239	Thr Ile Asn Leu Lys Glu Leu Glu Pro Gln Ile Ala Ser Ala Lys Pro				
240	295	300	305		

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/767,561

DATE: 03/07/2005

TIME: 15:24:13

Input Set : N:\Crf4\Refhold\10_folder\J767561.raw

Output Set: N:\CRF4\03072005\J767561.raw

L:21 M:220 C: Keyword misspelled or invalid format, [(A) APPLICATION NUMBER:]
L:22 M:220 C: Keyword misspelled or invalid format, [(B) FILING DATE:]
L:27 M:238 W: Alpha Fields not Ordered, Reordered [(A) APPLICATION NUMBER:] of (1) (vii)
L:29 M:238 W: Alpha Fields not Ordered, Reordered [(A) APPLICATION NUMBER:] of (1) (vii)
L:31 M:238 W: Alpha Fields not Ordered, Reordered [(A) APPLICATION NUMBER:] of (1) (vii)
L:441 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:7
L:444 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:7